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Division of Regulatory Services FY '98 Annual Report

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MASSACHUSETTS DEPARTMENT
OF FOOD AND AGRICULTURE

Jonathan L. Healy
Commissioner

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Letter from the Director

Overview

The Division of Regulatory Services in made up of the following sections:

- The Bureau of Farm Products and Plant Industries
- The Pesticide Bureau
- The Bureau of Animal Health

Each Bureau has its mandate to carry out as set down by the General Laws of the Commonwealth of Massachusetts, as well as regulations to enforce as required by these laws.

The pages that follow will give the reader all the details concerning the activities of each Bureau during FY ’98. As always the statistics section of the reports are very interesting to review as they point out the trends of the particular industry when comparing the figures with previous years.

Again in FY ’98 the Division budget was essentially level-funded; however, we survived the year in good order thanks to a well trained and efficient group of staff members. All of these staff members carry the Division goal in the back of their minds. This goal is to inspect and regulate in a uniform and reasonable manner, while at the same time educating the persons involved in the activity being inspected.

Staff changes in the Division during FY ’98

Bureau of Farm Products and Plant Industries

No changes.

Pesticide Bureau

Lillian Rivera resigned her position as Pesticide Registration Specialist to take a position in the private industry. This position was posted and after interviewing all candidates for the position, Susie Reed was selected to fill it.

Ursula Szablowski was selected to fill Susie Reed's vacated position until the position could be posted and applications received.

Iliana Rivas resigned her position with the Department and after the posting and interview process was completed, Gerard Kennedy was selected to fill the position.

Poonam Shrestha has been continued as a contract employee working on the "Groundwater Sampling and Pesticide Use Project."

Trevor Battle was hired as a contract employee to work on the Integrated Pest Management programs.

Tracy Owens was hired as a contract employee to assist with computer data entry.

Bureau of Animal Health

Michael Bastien resigned his position in the poultry section of the Bureau to take a job in the private industry. This position was posted and interviews of applicants will be held in FY '99.

Yvonne Antoon retired from her position in the Boston office.

Dr. Anne Mann, Chief of the Bureau, has informed the Department that she will be resigning her position in September 1998. We were disappointed to hear this news as Dr. Mann has pulled the Bureau of Animal Health together and has done a fine job carrying out her responsibilities.

We wish all staff members that have left the department, the best of luck in their new career paths.

Fees Review and Regulations

A. During FY '98 the Division, in conjunction with the Department, submitted a request for implementation of an updated fee structure to cover all of its twenty-two separate fee categories. At the close of FY '98 we had not received confirmation of these updated structures from Administration and Finance.

B. The following regulation was subjected to industry review, public hearing and was then fully promulgated by the Secretary of State.

Rabies - 330 CMR 4.03
The regulation review and update process slowed considerably in FY '98 due to the lack of counsel support and guidance for a good portion of the year.

Interdepartmental Service Agreements (ISA) and Contracts

The division initiated the following ISA's with the University Of Massachusetts at Amherst in FY '98:

Animal Diagnostic Testing	$212,000.00
Pesticide Analytical Laboratory	$163,000.00
IPM	$275,000.00

The Animal Diagnostic Testing ISA insures that the mastitis and brucellosis testing programs for dairy cows, pseudorabies testing for swine, and various tests for poultry will be carried out on a routine basis. In addition, emergency testing within the scope of the laboratory's capability is conducted when needed.

The Pesticide Analytical Laboratory conducts the analysis of product samples. Samples of materials being applied are collected to ascertain that the products meet label specifications and application specifications. The laboratory is also very helpful in determining the pesticide involved in investigatory sampling, from routine groundwater samples to swab samples taken in a suspected misapplication investigation. EPA grant funds received by the Bureau paid for $75,000.00 of the ISA, with the department picking up the remaining $88,000.00.

The information for growers, developed from projects carried out at the University from the funding provided by the Integrated Pest Management (IPM) ISA is very important. Information developed assists growers in properly evaluating field conditions, implements new treatment methods from mechanical to biological, and provides updated scouting information to insure that only the necessary amount of pesticides are used. IPM practices result in considerable monetary savings to farmers.

For FY '98 the Spectrum Analytic, Inc. Laboratory located in Washington C. H., Ohio was contracted by the Bureau of Farm Products and Plant Industries for analysis of feed, fertilizer and lime samples. The contract was for one year at a maximum expenditure of $24,000.00.

Individual Bureau Activities Overview

Bureau of Animal Health

The Bureau firmly moved ahead in the past year to a) bring all pet shops into compliance with the new regulations, b) carry out the provisions required for the swine pseudorabies program, c) quarantine all animal situations identified as possibly causing disease, d) increase oversight of the weekly auctions along with their many other cattle and poultry testing programs, and e) implement a cross training program with all staff members to create increased efficiencies by eliminating overlap of activities.

The Rabies Program Coordinator's report reveals that the number of animals identified as positive has increased in the past fiscal year. Rabies is on the rise with skunks being the most prevalent carrier. The rabies program coordinator continues to do a great job of implementing the requirements of the rabies program. Rabies remains a very serious threat to the animal and human population of Massachusetts.

Bureau of Farm Products and Plant Industries

The Bureau of Farm Products and Plant Industries is making steady progress in implementing their cross training efforts. Staff members have been very cooperative and are willing to share the various responsibilities. This effort resulted in two seasonal inspection staff members being hired in the nursery section of the Bureau, June 1998. The remainder of the work was handled by the Bureau's permanent staff. In previous years up to four seasonal nursery inspectors had been hired. The nursery inspection program is very important and by using more of our permanent staff for inspection of the nurseries, we have in effect upgraded the program. Upon approval, the nurseries are registered in the Bureau's certification booklet which is then distributed to all states indexing approved Massachusetts nursery products.

Due to the difficulty of finding proficient apiary inspectors, the Bureau hired four seasonal apiary inspectors--a reduction of one from the five seasonal apiary inspectors hired the previous year. The apiary industry is a very important section of MA agriculture, and it is imperative that we maintain healthy bees for crop pollination. Massachusetts has only 20% of the bees necessary for its crop pollination with the remainder 80% being supplied by migratory bees from Florida and Louisiana. Apples and cranberries are our two largest crops. The losses would be severe if there were not sufficient bees for crop pollination.

Bureau personnel took twenty-six samples from MA maple producers and had them analyzed for lead content at the Department of Public Health Laboratory in Jamaica Plain. This program aids producers of maple syrup in lowering the level of lead in their production.

FY '98 was a great year for apple production and the Bureau's inspection staff did a fine job of carrying out all requested inspections of apples for export.

The Bureau's Western MA office located in Amherst has turned out to be quite beneficial for the Bureau, the Department and the regulated community. In addition to routine inspection activities, the Bureau's satellite office has issued numerous phyto-sanitary certificates representing millions of dollars worth of products. This activity is highly efficient due to the location of a Bureau staff person at the Amherst office.

Pesticide Bureau

The Pesticide Bureau had a good year, not withstanding attacks from outside interests on some of its activities, such as the Hilltown Coalition located in Ashfield which adamantly protested roadside spraying. The Bureau carried out a great job of protecting the public from unnecessary pesticide exposure by their continual inspection, sample analysis and educational programs. In some cases related to the public water supply or where the public felt they had been unnecessarily exposed to pesticides, these activities were carried out with the Department of Public Health, the Department of Environmental Protection and the Metropolitan District Commission.

The Pesticide Board Subcommittee held regular monthly meetings throughout the year while the Pesticide Board held meetings as needed.

The IPM program, especially in the area of the Massachusetts IPM Council, was very active. This Council has potential to become a leader in the area of Urban/Structural IPM education.

A major accomplishment of the Bureau was the completion and distribution of the "Mixing Loading and Storage Guidelines" for pesticides.

The Bureau also facilitated several meetings concerning "On Farm Strategies to Protect Water Quality." This effort is directed toward assisting farmers to correct all point and non-point source pollution situations originating on their farm. The initial focus of this effort is directed toward animal feeding operations and *concentrated* animal feeding operations.

The strong computer expertise in the Bureau resulted in a new DFA Internet Web Site (www.massdfa.org) being set up that assists the viewer with *how to* information in the regulatory area. The site is linked to DFA's other web site--the Division of Agricultural Development.

Director's Closing Statement

This introductory letter provides an overview of the Divisions activities in FY '98. The following report give you more details. Please be sure to contact us if you have an interest area in one of the reports and would like further information.

I sincerely thank all staff members for their great work throughout FY '98. Special thanks goes out to those staff members that have gone the extra mile and have assisted the Department in extra curricular activities such as the Spring Flower Show, the Big E Exhibit and the Massachusetts Marketplace event at Elm Bank. We are a team. Together we have accomplished a great deal, and I wish to extend a sincere thanks to the Commissioner and the entire administrative section of the Department for the strong support throughout the year.

Respectfully submitted,

David L. Sheldon

David L. Sheldon, Director

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Bureau of Animal Health

Introduction

The Bureau of Animal Health, within the Department of Food and Agriculture, prevents the spread of contagious disease in domestic animals by enforcing laws, regulations and orders relative to the inspection, examination, quarantine and care of domestic animals affected with or exposed to contagious disease.

In accomplishing the goals of protecting animal and human health, preventing consumer fraud and supporting animal agriculture, the Bureau staff works closely with the following agencies: USDA-APHIS, Massachusetts Department of Public Health, Massachusetts Division of Fisheries and Wildlife, the MSPCA, the ARL of Boston, municipal animal inspectors and boards of health, and producers and veterinarians throughout the Commonwealth.

The following is a summary of activities for the programs operating within the Bureau of Animal Health. For additional information, please write or call:

Bureau of Animal Health
Massachusetts Department of Food and Agriculture
100 Cambridge St.
Boston, MA 02202
(617) 727-3018

Personnel

The organizational chart for the Bureau of Animal Health in FY '98 was as follows:

Name	Position
Anne Mann, D.V. M.	Bureau Chief
Lorraine O'Connor, D.V. M.	Veterinary Health Officer II
Frederick Mach, D.V. M.	Veterinary Health Officer I
Edward Hageman	Program Coordinator (Poultry)
Mike Bastien	Poultry Inspector (resigned Feb.' 98)
Megan Megrath	Poultry Inspector
Richard LaBranche	Animal Inspector
Glenn Harris	Animal Inspector
Elizabeth Hall	Animal Inspector
Mike Cahill	Program Coordinator (Rabies)
Esther Wegman	Administrative Assistant II
Sandra Pepe	Clerk IV
Yvonne Antoon	Clerk III (retired Jan.'98)
Auzinda Tavares	Clerk III

Pet Shops

A continued effort to ensure compliance with the Pet Shop Rules and Regulations resulted in several hearings for shops which did not have facilities that met the standards required by 330 CMR 12.00. The Bureau of Animal Health prevailed in all hearings. Most shops moved quickly to come into compliance after the hearings.
One pet shop was quarantined for an outbreak of parvovirus in puppies. Nine pet shops were quarantined for psittacosis in pet birds.

Pseudorabies

Massachusetts was advanced to Stage IV status in the combined State-Federal Industry Pseudorabies Eradication Program and maintained that status throughout FY '98.

Auction/Markets

A new State/Federal Cooperative Agreement with Livestock Markets was begun in early 1998. The agreement establishes a national standard for the handling of swine at markets and eases restrictions on Massachusetts farmers using Massachusetts markets. The implementation of new practices and procedures is ongoing.

Poultry

Poultry farmers can make it in Massachusetts. This is an industry in which a producer can go from the farm directly to the consumer with eggs, meat, chicks or compost. The relationship between the Massachusetts poultry producer--working with Massachusetts Markets--and the Poultry Section of the Bureau of Animal Health proves very beneficial.

The Poultry Section responds to all aspects of poultry production; it is our responsibility to identify and evaluate the needs of Massachusetts poultry producers as they relate to the Bureau of Animal Health. We strive to identify and prioritize programs with the most advantages for Massachusetts poultry producers and consumers. We re-evaluate our efforts each year and report the results of these programs in this annual report.

The program which involves the most commitment and time is the Salmonella testing. This program is the front line of protection for consumers of poultry and for farmers producing poultry and poultry products. This program involves all aspects of poultry production; more than ten thousand (10,000) samples were collected in FY '98.

A relatively new program which began after reported outbreaks of poultry disease is the Avian Influenza testing program. By testing commercial flocks for this disease, our poultry producers can confidently ship birds into live bird markets; this increases the producers' options for sales and increases profitability.

Other programs, such as MG, MS and MM testing, enabled Massachusetts producers to ship more than thirty-three thousand (33,000) chicks and ninety-seven hundred (9,700) hatching eggs out of Massachusetts. Again, this increases the producers' options for sales.

What may seem to be a totally different aspect of the poultry section's program is the product inspection service. This too is based on producer support. The service starts at the farm, establishing quality grading and then follows the poultry product right through to the market. The last step, retail inspection, is extremely important to Massachusetts producers. It ensures that all poultry products, even those produced outside of Massachusetts, meet the same quality standards. Three hundred eighty-six (386) inspections for quality were made in FY '98. This is a program in which we will strive to be more active in FY '99.

In the opinion of the poultry program coordinator, the poultry industry will continue to grow in economic value if Massachusetts continues to maintain a commitment to Massachusetts poultry producers. By keeping this commitment to quality, our Massachusetts poultry farmers should see strong market results.

Poultry Activity Report

Activity	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Totals
Pullorum-Typhoid Samples	1,518	1,799	890	183	1,029	442	196	1,058	1,513	940	522	566	10,656
M.G. Samples Taken	0	18	387	0	0	322	0	599	545	250	300	492	2,913
M.S. Samples Taken	0	18	438	0	0	322	0	150	480	250	300	492	2,450
S.E. Monitor Barn Visits	1	0	0	3	2	1	3	9	5	4	4	2	34
Exported Chicks	4,210	5,844	3,220	3,700	2,000	4,500	0	0	0	0	2,756	6,868	33,098
Exported Hatching Eggs	0	96	0	0	0	2,000	3,195	1,315	1,000	1,300	400	400	9,706
Poultry Exhibitions	0	0	0	0	0	0	0	0	0	0	0	0	0
USDA Shell Egg Surveillance Inspections	5	2	5	5	2	1	3	2	5	1	7	0	38
USDA School Lunch Inspections	1	0	1	2	0	0	0	1	0	0	0	0	5
Retail Store Inspection Visits	16	0	10	50	45	39	58	39	18	19	29	14	337
Retail Store Violations: Fresh	1	0	0	0	0	0	0	0	0	0	0	0	1
Retail Store Violations: Size	2	0	0	0	0	0	0	1	0	0	0	1	4
Retail Store Non-Violations	29	0	20	100	90	78	116	77	36	38	58	27	669
State Institutions Inspected	0	0	2	2	1	0	0	1	0	0	0	0	6
State Institutions Cases Inspected	0	0	6	4	1	0	0	2	0	0	0	0	13
State Institutions Cases Rejected	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	5,783	7,777	4,979	4,049	3,170	7,705	3,571	3,254	3,602	2,802	4,376	8,862	59,930

Rabies Exposures and Quarantines

Exposure Categories:
Category 1 - Direct contact with a confirmed rabid animal
Category 2 - Direct contact with a suspect rabid animal
Category 3 - A wound of unknown origin
Category 4 - Close proximity to a confirmed rabid animal

Quarantines for Exposure Categories:
Category 1 - Current Vaccinate = 45 Days, Nonvaccinate = Euthanasia, or 6 Months
Category 2 - Current Vaccinate = 45 Days, Nonvaccinate = Euthanasia, or 6 Months
Category 3 - Current Vaccinate = 45 Days, Nonvaccinate = Euthanasia, or 6 Months
Category 4 - Current Vaccinate = 45 Days, Nonvaccinate = 6 Months

Total Number of Animals Exposed or Potentially Exposed to Rabies = 3,507

Exposure Category	Total Exposed	Current Vaccinates	Nonvaccinates
(1) Direct contact with a confirmed rabid animal	354	278	76
(2) Direct contact with a suspect rabid animal	577	539	38
(3) A wound of unknown origin	2440	1281	1159
(4) Close proximity to a confirmed rabid animal	136	107	29

Exposures by Type of Animal

Animal Exposed	Category 1		Category 2		Category 3		Category 4		Total Exposed
	Vaxed	Not Vaxed	Vaxed	Not Vaxed	Vaxed	Not Vaxed	Vaxed	Not Vaxed	
Cat	8	14	377	21	1,068	1,029	4	13	2,534
Cow	0	17	0	0	0	0	2	0	19
Dog	267	43	162	17	212	127	46	16	890
Horse	3	0	0	0	1	0	55	0	59
Llama	0	2	0	0	0	0	0	0	2
Rabbit	0	0	0	0	0	2	0	0	2
Sheep	0	0	0	0	0	1	0	0	1

Exposure Category	Total Euthanized	Current Vaccinates	Nonvaccinates
(1) Direct contact with a confirmed rabid animal	44	4	40
(2) Direct contact with a suspect rabid animal	7	3	4
3) A wound of unknown origin	35	2	33
(4) Close proximity to a confirmed rabid animal	2	0	2
Totals	88	9	79

Euthanasia by Type of Animal

Animal Euthanized	Category 1		Category 2		Category 3		Category 4		Total Euthanized
	Vaxed	Not Vaxed	Vaxed	Not Vaxed	Vaxed	Not Vaxed	Vaxed	Not Vaxed	
Cat	0	10	2	2	2	28	0	1	45
Dog	4	30	1	2	0	5	0	1	43

Domestic Animal Bites and Quarantines

There were 4,491 domestic animal bites during FY '98. The following chart summarizes by species those animals that bit, and the results of their quarantines.

Biting Animal	Total Number of Bites	Number of Animals Quarantined and Released	Animals Euthanized During Quarantine and Tested Negative	Animals Euthanized During Quarantine and Not Tested *	Number of Animals Unavailable For Release From Quarantine**	Number of Animals Unavailable For Quarantine ***
Cat	804	602	175	2	0	25
Dog	3,679	3,388	39	6	2	244
Goat	1	1	0	0	0	0
Horse	4	4	0	0	0	0
Llama	1	1	0	0	0	0
Pig	1	1	0	0	0	0
Rabbit	1	0	1	0	0	0

* Bite reported to Animal Inspector after the animal owner euthanized the animal.
** Owner of biting animal moved without notifying Animal Inspector. Animal was never released.
*** Animal Inspector was unable to find the owner or biting animal due to a lack of information.

Bovine Tuberculosis

There were ninety-four (94) herds tuberculin tested in fiscal year 1998 by State or State contracted veterinarians encompassing eight thousand one hundred twenty-one (8,121) head of cattle. Three thousand five hundred twelve (3,512) cattle were tested privately. There were a total of thirty-five (35) deviates. Thirty-two (32) deviates were negative to the comparative cervical retest and three (3) were positive to the retest. After a 60 day period, all three (3) positives were retested and found negative.

Tuberculin tests are conducted by State and Federal Accredited Veterinarians under the State and Federal Cooperative Plan for the establishment of Tuberculosis Free Herds and eradication of Bovine Tuberculosis.

Massachusetts continued its Accredited-Free status for Bovine Tuberculosis in fiscal year 1998.

Caprine Tuberculosis

Under the present Tuberculosis testing program, dairy goats are tested for Tuberculosis every three years, the same as for cattle. There were no herd tests done this year. One thousand two hundred three (1,203) were tested privately.

Among those goats tuberculin tested this year, there were twelve (12) deviates. All twelve (12) were negative to the comparative cervical retest.

Payments to Fee Basis Veterinarians

MONTH	TB	VACCINATIONS	BRUCELLOSIS	TOTALS
JULY	0	152.00	0	152.00
AUGUST	441.00	782.00	0	1,223.00
SEPTEMBER	0	491.00	0	491.00
OCTOBER	0	351.00	0	351.00
NOVEMBER	723.00	674.00	0	1,397.00
DECEMBER	4,557.00	1,734.00	0	6,291.00
JANUARY	780.00	2,176.00	0	2,956.00
FEBRUARY	0	639.00	0	639.00
MARCH	7,200.00	2,231.00	0	9,431.00
APRIL	2,925.00	1,549.00	0	4,474.00
MAY	492.00	720.00	0	1,212.00
JUNE	165.00	2,876.00	0	3,041.00
TOTAL	**17,283.0**	**14,375.00**	0	**31,658.00**

Brucellosis

Listed below are results of laboratory examinations of blood samples from cattle, swine, goats, alpacas/llamas, deer, yak, bison and camels.

ANIMAL	Negative	Suspicious	Reactors	Other*	Totals
Cattle	3,509	31	0	30	3,570
Swine	1,280	0	0	3	1,283
Goats	1,151	12	0	3	1,166
Camelids	146	0	0	0	146
Misc.**	47	0	0	0	47
Totals	6,133	43	0	36	6,212

*Hemolyzed, no serum, broken tube
**Deer, sheep, yak, bison

Calfhood Vaccination - State's Expense

Herds	583
Head	4,915

Massachusetts retained its Class-Free status for Cattle Brucellosis and Validated Free for Swine Brucellosis standings throughout the 1998 fiscal year.

Equine Infectious Anemia Tests

TOTAL NUMBER OF POSITIVES 0

COUNT OF NEGATIVE TESTS IS NO LONGER BEING DONE

Miscellaneous Diseases Reported

Psittacosis	12 cases
Parvovirus	1 case
Johne's	2 cases
Newcastle	1 case
Infectious Laryngotracheitis (ILT)	2 cases

Animals Imported Into Massachusetts from Other Countries[1]

COUNTRY	BIRDS	CATTLE	GOATS	HORSES	SHEEP	SWINE	ZOO ANIMALS	TOTALS
AUSTRIA				1				1
BELGIUM				2				2
BRAZIL				1				1
CANADA	8	390	362	174	48	198	48	1228
DENMARK				1				1
FRANCE				12				12
GERMANY				22				22
ICELAND				1				1
IRELAND				9				9
MEXICO				1				1
NETHERLANDS				27				27
UNITED KINGDOM	60			35			1	96
TOTAL	68	390	362	286	48	198	49	1401

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[1] Information derived from health certificates.

Animals Entering Massachusetts from Other States and Possessions

STATE	BIRDS	CATS	CATTLE	DEER	DOGS	FERRETS	GOATS	HORSES	LLAMAS	PRIMATES	RABBITS	RODENTS	SHEEP	SWINE	ZOO ANIMALS	TOTALS
ALABAMA		14	1		45			52		1		5				118
ALASKA	1	42			71										1	115
ARIZONA	6	98			246	2		25			1	3				381
ARKANSAS	385	8			13		362						48	198		1,014
CALIFORNIA	11	245			96		2	19			2	2	19		1	397
COLORADO	1	114		3	283			7			4				1	413
CONNECTICUT		3	208		4		92	32					81			420
DELAWARE								37								37
FLORIDA	57	184	19		726	1		475		58		2	3	1	60	1,586
GEORGIA		1			8			3						1	4	17
HAWAII	1	1						2								4
IDAHO		13			34			3								50
ILLINOIS	3	33	1		43		1	6				1		22		110
INDIANA	1	24			65			7		1					4	102
IOWA		24			2,195			51	1					4		2,275
KANSAS	3	94	3		2,957			1	3						1	3,062
KENTUCKY					1			17							1	19
LOUISIANA		5			36			8		30		1			1	81
MAINE			424	4	7		19	21	33				7			515
MARYLAND		1	139		2		8	11					6	11		178
MICHIGAN	3	23			85		2	16		4		222	4		5	364
MINNESOTA	6	51			1,562	2		3	6			6		172		1,808
MISSISSIPPI		3			24			1								28
MISSOURI	1	62			3,956		1	13				2	10		2	4,047
MONTANA		18			39	1		4					2		1	65
NEBRASKA		31			1,013		68	2		4				227		1,345

NEVADA	2	30			179					8						219
NEW HAMPSHIRE		1	429		5		23	48	14				31	75	1	627
NEW JERSEY			6		29			12								47
NEW MEXICO		17			57		2	5			2					83
NEW YORK		2	573		2		15	71					2	568	6	1,239
NORTH CAROLINA	1	95	3		135	1		35			5	242				517
NORTH DAKOTA		3			51			3							1	58
OHIO	1				2			9	10				16	55		93
OKLAHOMA	812	23			1,232			16				15	5		1	2,104
OREGON		62			128		5	1		37	2	8	11	2		256
PENNSYLVANIA	1	2	6		81	743	4	21	3	5		4	2	492		1,364
PUERTO RICO	32	15			71	83										201
RHODE ISLAND			2		1		3	2	1				3		3	15
SOUTH CAROLINA	25	25			46			45		90	100				3	334
SOUTH DAKOTA		7			619								766	1	1	1,394
TENNESSEE		26	1		110	2		4			1					144
TEXAS	10	41	7		64		1	28		32		39			1	223
UTAH	69	18			48	1		1				9				146
VERMONT		2	400				5	52	2				9			470
VIRGINIA	1	24	236		231			85					1		1	579
WASHINGTON	13	133			217		1	1	2	10	10	1	2	35	1	426
WEST VIRGINIA		5			13			9								27
WISCONSIN	7	120	4		92			14		2	2					241
WYOMING	1	12			11			8								32
TOTALS	**1,454**	**1,755**	**2,462**	**7**	**16,935**	**836**	**614**	**1,286**	**75**	**282**	**129**	**562**	**1,028**	**1,864**	**101**	**29,390**

Animals Exported from Massachusetts

STATE	AVIAN	CATTLE	CERVIDS	GOATS	HORSES	LLAMAS / ALPACAS	PRIMATES	RABBITS	SHEEP	SWINE	TOTALS
ALABAMA		1			22						23
ALASKA											0
ARIZONA		8			31	6					45
ARKANSAS											0
CALIFORNIA		23		6	83						112
COLORADO					7						7
CONNECTICUT		394			27	1			16	5	443
DELAWARE					12						12
FLORIDA		240		8	801			3			1,052
GEORGIA					5						5
HAWAII											0
IDAHO		6			1						7
ILLINOIS					22						22
INDIANA		5			2						7
IOWA					2						2
KANSAS					2						2
KENTUCKY		7			28				17		52
LOUISIANA					1						1
MAINE		60			36						96
MARYLAND		2		41	26				13		82
MICHIGAN		1			14				1		16
MINNESOTA		1			1						2
MISSISSIPPI					3						3
MISSOURI	50	20			36				9		115
MONTANA					2				1		3
NEBRASKA											0

NEVADA					1						1
NEW HAMPSHIRE		120		4	99	1			7	63	294
NEW JERSEY		3			44	10			4		61
NEW MEXICO				1	7						8
NEW YORK		1212			207	4			16	48	1,487
NORTH CAROLINA		3			32						35
NORTH DAKOTA											0
OHIO		10	36		32	1			4		83
OKLAHOMA		17			16	2					35
OREGON					4						4
PENNSYLVANIA		592			71	6			3	1	673
PUERTO RICO											0
RHODE ISLAND		59		2	9				2	4	76
SOUTH CAROLINA		3			46						49
SOUTH DAKOTA											0
TENNESSEE		12			7				3	9	31
TEXAS		76			18		1				95
UTAH		17			2						19
VERMONT		1140			87	4			1		1,232
VIRGINIA				1	80	1			4	1	87
WASHINGTON					8						8
WEST VIRGINIA		2			19						21
WISCONSIN		17			5						22
WYOMING					5						5
TOTALS	50	4051	36	63	1963	36	1	3	101	131	6435

Annual Animal Inspection Summary

In accordance with Chapter 129 sec. 10 of the General Laws, the annual inspection of animals and the premises where they are kept was completed.

Reports were received from two hundred fifty-five (255) of the three hundred fifty-one (351) cities and towns in the Commonwealth of Massachusetts. Twenty-three cities and towns did not have any livestock. The following is a compilation of data received.

COUNTY	CATTLE[1]	GOATS	EQUINE	LLAMAS	POULTRY[2]	RABBITS	RATITES	SHEEP	SWINE	MISC.[3]
BARNSTABLE	71	122	926	14	2,434	136	0	153	120	23
BERKSHIRE	6,837	115	1,234	177	26,099	570	0	574	314	33
BRISTOL	5,093	736	1,207	11	5,876	748	449	354	596	1,708
DUKES	331	36	368	7	1,289	26	0	370	59	83
ESSEX	2,423	266	2,984	35	12,684	208	4	421	195	148
FRANKLIN	8,297	234	1,089	29	14,585	122	76	868	247	71
HAMPDEN	1,477	177	952	11	18,147	515	0	456	76	138
HAMPSHIRE	4,595	162	1,103	44	2,239	115	35	1,275	1,083	164
MIDDLESEX	1,675	372	2,304	37	13,131	1,109	421	810	1,324	643
NANTUCKET	12	0	27	2	75	20	0	12	0	0
NORFOLK	539	131	1,514	7	2,930	217	5	476	81	90
PLYMOUTH	1,753	346	2,274	86	9,327	89	14	524	1,894	130
SUFFOLK	0	0	800	0	0	0	0	0	0	0
WORCESTER	9,641	2,063	3,788	131	539,289	695	235	1,845	4,885	261
TOTALS	**42,744**	**4,760**	**20,570**	**591**	**648,105**	**4,570**	**1,239**	**8,138**	**10,874**	**3,492**

[1] The total number of dairy cattle inspected was thirty-three thousand ninety-three (33,093) not including steer and oxen.
The total number of beef cattle inspected was thirteen thousand six hundred five (13,605) not including steer and oxen.
Of the total number of cattle inspected one thousand twenty-three (1,023) were steer and oxen.

[2] Poultry includes Chickens, turkeys, waterfowl and game birds.

[3] Miscellaneous animals include bison, Fallow deer, reindeer, donkeys, mules, alpacas, chinchillas, doves, pigeons and peafowl.

Sale and Auction Barn Totals

Sale/Barn*	Cattle	Calves	Swine	Sheep/ Goats	Horses	Llamas	Total
Farmer's Live Animal Market Exchange	13,986	8,726	2,646	5,607	12		30,977
Camara's NE Commission Auction	2,265	790	1,597	2,192		2	6,846
Northampton Cooperative Auction	2,527	6,589	4,861	11,507			25,484
Crowley's Commission Sales					2,426		2,426
TOTALS	**18,778**	**16,105**	**9,104**	**19,306**	**2,438**	**2**	**65,733**

*Peila Bros. is no longer an auction.

Permits, Licenses & Vehicle Decals Issued

Permit to Feed Garbage to Swine Chapter 129, sec. 14B	**37**
License to Deal in Porcine Animals Chapter 129, sec. 39	**18**
License to Deal in Bovine Animals Chapter 129, sec. 39	**33**
License to Operate a Guard Dog Business Chapter 129, sec. 39B	**2**
License to Operate a Pet Shop Chapter 129, sec. 39A	**198**
Bovine & Porcine Decals Chapter 129, sec. 40	**37 & 18**

Revenue Producing Programs

Permit to Feed Garbage to Swine	$330.00
Pet Shop Business License	$11,150.00
Guard Dog Business License	$100.00
Cattle Dealer License	$330.00
Cattle Dealer Decal	$195.00
Swine Dealer License	$190.00
Swine Dealer Decal	$95.00
Shell Egg Surveillance	$6,039.13
TOTAL	**$18,429.13**

The above figures are from cash book receipts (monies actually received in fiscal year 1998) and may not correlate directly with licenses issued (see individual program reports) since many licenses require preliminary inspections or requirements.

3

Bureau of Farm Products and Plant Industries

Introduction

The Bureau of Farm Products and Plant Industries had a very fruitful year, especially in the field of inspections and the registration of feed and fertilizer products. Demand for inspection of farm products, nurseries, greenhouses and apiaries continues to be very high. These quality-control programs have proven to be extremely popular and helpful with growers, farmers, shippers, sellers, buyers and consumers as demand for high quality products continues to increase. The Amherst office of Plant Protection Quarantine (PPQ), a division of the United States Department of Agriculture (USDA) and Animal and Plant health Inspection Service (APHIS), was taken over by the Massachusetts Department of Food and Agriculture (MASSDFA) effective January 1, 1998.

The Bureau's staff consists of the following personnel:

Name	Position
George Porter	Bureau Chief
Phyllis Michalewich	Marketing and Product Utilization Specialist III
Robert Rondeau	Marketing and Product Utilization Specialist III
Alfred Carl	Program Coordinator I
Ellen Krause	Marketing and Product Utilization Specialist II
Howard Vinton	Marketing and Product Utilization Specialist II

The privatization of the Bureau's Feed and Fertilizer Analysis Program went well, proving to be most beneficial to farmers and other animal owners. The successful bidder for testing the feed and fertilizer samples for the guaranteed analysis was Spectrum

Analytic, Inc., 1087 Jamison Rd.., Washington C.H., Ohio 43160. Privatizing has proven to yield a substantial savings for the Department.

The Bureau of Farm Products and Plant Industries administers diversified quality-control programs on farm products and nursery stock. The Federal-State Fruit and Vegetable Shipping Point Inspection Program is the most important Bureau program to the growers. The Bureau enforces the Truth-in-Labeling Laws on fruit, vegetables, commercial feed, pet food, fertilizer, lime and seeds. Controlled Atmosphere (CA) storage rooms are checked on a regular basis for compliance. The Bureau of Farm Products and Plant Industries collects more than $500,000 annually in product registrations, Nursery Certification and inspections. In addition, the Bureau publishes a weekly "Apple Report" covering in detail the retail and wholesale prices, storage holdings by important varieties and market movement, especially that of the McIntosh variety. The "Apple Report" has proven very helpful to growers, packers, sellers and roadside stand operators. At its seventy-sixth consecutive year being published, this all important market report is the oldest of its kind in the United States.

The Bureau, with one full-time person and three seasonal inspectors, administers the inspection program, certifying nurseries and greenhouses annually during the summer months. An agent's license is issued to those who buy and sell nursery stock from certified nurseries throughout the country. The State and Federal Phytosanitary Certificates are issued by our trained staff for shipment of plant and plant materials to other states and foreign countries certifying the shipment as being free from insects and disease. Apiary inspections are made annually for monitoring of disease and insect pests throughout the state on thousands of bee hives. This inspection program aids in the safe transportation of bee hives from one state to another.

Fruit and Vegetable Inspection

Demand for our inspection services increased and was weighted heavily toward exporting apples, primarily those shipped to the United Kingdom and Canada. Apples were also certified for shipment to California where demand has been increasing. In total, more than 167,000 bushels of Massachusetts apples carried the federal-state inspection certificate for export. Due to educational programs, used to train growers how to pack produce for the wholesale market, vegetable inspections at the Pioneer Valley Growers Association (P.V.G.A.) in Whately and Coastal Growers Association (C.G.A.) in Westport have stabilized. This program has proven to be very valuable and helpful to the farmers, shippers and buyers. The demand for top quality produce has proven that this inspection service is essential.

The Export Apple Inspection Program is of major importance, primarily because of the demand for controlled atmosphere (CA) stored apples, including our valuable McIntosh variety and quality packs. McIntosh apples cannot be grown successfully in European Countries. The CA method of storing apples greatly lengthens the marketing season, allowing shipment of apples in good condition well into June.

Feed Program

Over 5,700 labels of animal feed, medicated feed ingredients and pet food were reviewed and registered throughout the year. A total of 280 feed and pet food samples were drawn for testing of Protein, Fat and Fiber and declaration of ingredients exactly as they appear on the labels. Spectrum Analytic, Inc., was awarded the contract to test the feed.

Fertilizer program

A total of 2,102 labels of fertilizer products were reviewed and registered for the year. A total of 461 samples of fertilizer products being offered for sale in Massachusetts were taken and tested at the Spectrum Analytic Laboratory for Nitrogen, Phosphorus and Potash. Assessment penalties in shortage of guaranteed levels were charged, with fines collected and turned back to the farmers or submitted to the state's treasury. Tonnage taxed were assessed and collected on a semi-annual basis.

Lime Program

A total of 48 limestone labels were reviewed and registered during the year. Samples of lime products were taken and tested at the Spectrum Analytic, Inc. Laboratory for conformance.

Branding Law

Inspections were made at hundreds of retail stores for conformance of the Branding Laws on potatoes and apples. Misbranded products were relabeled or removed from sale by issuing a "Stop Sale Order." Stop Sale Orders were issued on apples and potatoes that did not meet grade expectations. These lots were removed from the store shelves and shipped back to the packer.

Storage Laws

Records are kept on cold storage and CA apple rooms to assure compliance with storage laws. This allows Massachusetts apples to be shipped into distant markets year round especially where states have restrictions. CA rooms can now be opened after 60 days after sealing instead of 90 days. Over 25 fruit growers in Massachusetts now have 75 CA rooms that are inspected and checked three times during the storage season for compliance.

Amherst Office

The Amherst Office was taken-over by the Bureau of Farm Products and Plant Industries on January 5, 1998 and Bureau staff at this location have assumed the duties of the USDA, APHIS, PPQ. Al Carl and Ellen Krause are responsible in carrying out these duties from this office. The transition of this office, from USDA to the Massachusetts Department of Food and Agriculture, went quite smoothly due to the cooperation of both departments. Not only are APHIS PPQ duties carried out from this office, but telephone calls, regarding vegetable/fruit pests, bee inspections, and phytosanitary requirements, are fielded and answered their in a timely manner. This office also assists in redirecting calls for the USDA Inspection Service, Farmers Home Administration, Rural Development, Farm Services Agency, Natural Resources, Conservation Services, Wildlife Damage Control, and many other farming/agricultural related issues.

Another inspection service that is new from the Amherst Office is the nursery stock certification inspection program. Other services include inspections at the Pioneer Valley

Growers Association as well as feed and fertilizer sampling. The inspectors also assist the USDA in their trapping and surveying programs on the bark beetles, Japanese Beetles and the Asian Longhorn beetle.

The phytosanitary inspections were the primary responsibilities taken from the USDA and given to Bureau staff. Inspectors Ellen Krause and Al Carl have inspected lumber, both kiln dried and green, logs, tobacco, and other plant materials. The total estimated value of these products is $15 million for the period of January 5, 1998 to June 30, 1998. Tobacco had the highest value at $13.2 million with hardwood lumber, maple, white and red oak logs at $1.8 million. Hemlock inspections were made in the woods - on the stump - which required 170 industrial state phytosanitary certificates.

Feed Fertilizer and Lime Registration Products for the Calender Year

	1993	1994	1995	1996	1997	1998
Feed Products	4,271	4,549	4,799	5,219	5,354	5,709
Speciality Fertilizer Products	1,645	1,769	1,720	1,917	2,278	2,102
Commercial Fertilizer Licenses	26	26	22	29	28	30
Lime Products	50	65	60	62	53	48

Feed, Fertilizer and Lime Receipts for Calender Year

Year	1993	1994	1995	1996	1997	1998
Feed Products	$213,550	$227,450	$239,950	$260,950	$267,700	$285,450
Specialty Fertilizer Products	$82,250	$88,450	$86,000	$95,850	$113,900	$105,100
Commercial Fertilizer Plants	$3,250	$3,250	$2,750	$3,625	$3,500	$3,750
Lime Products	$2,500	$3,250	$3,000	$3,100	$2,650	$2,400
Fertilizer Tonnage Fees	$14,002	$13,529	$14,859	$18,115	$18,847	$17,705
Fertilizer Penalty Assessments	$12,270	$7,507	$11,182	$8,372	$14,994	$19,322

Fruit and Vegetable Inspection Receipts for Calender Year

Year	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Apples	$7,795.78	$5,745.64	$9,098.31	$11,000.31	$9,299.11	$12,664.09
Cranberries	$280.00					$374.22
P.V.G.A.*	$515.00	$890.00	$825.00	$410.00	$1,055.00	N/A
C.G.A.**		$570.00	$460.00	$635.00	$860.50	N/A
Total	$8,590.78	$7,205.64	$10,383.31	$12,045.00	$11,214.61	$13,038.31

*Pioneer Valley Growers Association
**Coastal Growers Association

Apples Exported

YEAR	1987	1988	1989	1990	1991	1992
CARTONS	91,375	126,593	236,559	226,354	127,693	145,402
VALUE	1,096,500	1,519,116	2,838,708	2,716,248	1,532,316	1,744,824

YEAR	1993	1994	1995	1996	1997	1998
CARTONS	102,847	72,545	122,967	149,759	125,201	167,911
VALUE	1,234,164	870,540	1,708,000	2,246,385	1,878,015	2,518,665

Nursery Inspection

Three seasonal inspectors were hired June 1997 to conduct our annual nursery inspection program.

1997 inspection began on June 1, 1997. 261 initial inspections, were finalized by August 30, along with 27 follow-up inspections. 3,184 acres of growing area were inspected.

Due to the lack of snow and relative cold weather during our '96 - '97 winter season, there was noticeable winter injury. Heat stress was visible in many nurseries again this year.

Insect activity was minimal, with the usual Black vine weevil, aphids, spider mites, lace bug, Japanese beetle, eastern tent caterpillar, leafminer, scale, mealybug, fungus gnats, thrip, white fly, slugs, and several types of galls. Powdery mildew and botrytis was also found in limited numbers. Gypsy moth was very slight.

As a Federal cooperator our inspectors' duties have increased considerably. Pine shoot beetle, Hemlock wooly adelgid and Lily leaf beetle surveys were conducted in cooperation with USDA/APHIS/PPQ. A joint inspection of the Otis Methods Development Laboratory was also conducted.

In cooperation with the USDA/CAPS (Cooperative Agriculture Pest Survey) program there was a survey done in 6 counties on geraniums for tomato looper, old army bollworm, and Egyptian cotton moth. This involved an 8 week trapping program. There were no positive finds during this survey.

Special Certificates

State phytosanitary certificates	489
Tree seed phytosanitary certificates	234
Federal phytosanitary certificates	73
Federal phytosanitary certificates/apples	179
Houseplant certification	26
Control area permits	4

12 Post Entry sites were approved in 1997 and regularly inspected.

Nursery & Agent License Receipts

HOUSEPLANT	Free Service
GREENHOUSES	$500.00
NURSERIES	$6440.00
AGENTS	$25,740.00
TOTAL	$32,680.00

NURSERIES & AGENTS/COUNTY/ACREAGE

COUNTIES	<1	1 - 5	6 -25	26 - 100	100 +	GREEN-HOUSES	AGENTS
Barnstable	8	8	4	0	0	4	76
Berkshire	5	8	0	0	0	0	28
Bristol	10	12	7	2	0	1	82
Dukes	5	0	0	0	0	0	10
Essex	7	6	5	2	1	2	90
Franklin	1	2	7	0	2	2	10
Hampden	2	6	6	0	1	1	55
Hampshire	5	5	0	1	0	2	20
Middlesex	11	18	6	3	1	4	169
Norfolk	8	10	2	1	0	1	102
Plymouth	8	9	4	2	0	1	81
Suffolk	0	1	0	0	0	0	44
Worcester	12	10	4	0	1	2	91
TOTALS	**82**	**95**	**45**	**11**	**6**	**20**	**858**

Apiary Inspections

Four seasonal apiary inspectors were hired to survey, from July through mid-October of 1997, for honeybee colonies for brood diseases and parasitic mites in the following counties: Essex, Middlesex, Norfolk, Worcester, Hampden, Hampshire, and Franklin Counties. Apiary inspections resumed with the same staff in June of 1998 and continued until mid-October of 1998. Spot inspections as requested by beekeepers were conducted in Plymouth, Bristol, and Berkshire Counties during FY '98. Accompanying data indicates the apiary inspection accomplishments for FY '98. Honeybee hives originating from Florida and leased for cranberry pollination were surveyed for the presence of fluvalinate-resistant varroa mites, ***Varroa jacobsoni,*** and small hive beetle, ***Aethina tumida.*** Apiary inspection is weather dependant and field inspectors are generally discouraged from disrupting colonies during extreme weather events because of the resulting defensive hive behavior. Beekeepers are encouraged to regularly inspect their colonies for symptoms of American foulbrood, ***Paenbacillus larvae,*** and varroa mites.

Two honeybee operations, originating from Florida and used for cranberry pollination, were partially inspected for the presence of small hive beetle and varroa mite resistance to fluvalinate. Small hive beetle was not found in 1998. A field assay relying upon a comparison in mite drop between 2.5% and 10% fluvalinate strips using paired samples of live honeybees from the same colony were collected from 24 randomly selected colonies in two commercial operations(12 hives per operation). Mite mortality percent was calculated for each fluvalinate concentration. Less than 45% and 65% mortality was achieved from the 2.5% or 10% pairs respectively demonstrating the beginning of fluvalinate resistance. Miticide resistance has not occurred when 85% or more varroa mites are killed by the 2.5% and 10% fluvalinate strips in this assay over a 24 hour period.

Quarterly meetings with the Massachusetts Farm Bureau Federation, Inc. (MFBF) Honeybee Advisory Committee have served as a sounding board for recommendations from the beekeeping industry. A proposal for DFA and MFBF to update a beekeeping manual originally developed by Dr. Frank Shaw, Department of Entomology, University of Massachusetts, to serve as a teaching aid, has evolved to the practical stage. Except for disease and mite control measures which must be added to the manual, all of the hive management procedures are still applicable.

The 1997-1998 winter was quite out of the ordinary. A seemingly harsh winter starting in mid-November and mellowing by early February, turned very mild. So mild that less than 5% of resident honeybee colonies succumbed--particularly those with the varroa mite control that had been initiated the previous August. After an unusually early peach bloom in mid-April, weather conditions became so cold and rainy for apple bloom (first of May) that many orchards in northern and eastern Massachusetts received very little honeybee pollination. Honeybee colonies leased for orchard pollination were unable to fly in the rain; the result was a notably poor state-wide apple set.

Apiary Inspection Statistical Report for 1998 Season

County	# Colony Examined	# Colony Owned	# Colony A.F.B.[1]	# Colony E.F.B.[2]	# Colony VMSUR[3]	Varroa Mite Detected[4]	Bee Keepers[5]
Duke	0.00	119	0.00	0	0.00	(1992)	36
Barnstable	0.00	1200M 170R	0.00	0.00	0.00	(1988)	125
Berkshire	0	256	0.00	0.00	0.00	(1994)	95
Bristol	13	3300M 605R	0	0.00	13	13	125
Essex	282	1193	10	0.00	282	225	254
Franklin	140	392	5	0.00	140	82.00	100
Hampden	175	206	0	0.00	175	51.00	52
Hampshire	228	228	6	0.00	228	96	57
Middlesex	613	96M 613 R	58	0.00	613	458	308
Norfolk	336	336	11.00	0.00	336	201.00	116
Plymouth	650	16400M1 016R	0.00	0.00	650	577.00	149
Worcester	1512	1512	15	0.00	1512	211	453
Nantucket	0.00	95	0.00	0.00	0.00	(1991)	13
Total	**3949**	**20996M 6741R**	**105**	**0.00**	**3949**	**1914**	**1883**

2.65 % and 0.00% of the total A.F.B. and E.F.B. colonies surveyed respectively, showed detectable populations of varroa mites. Overall, 48.5% of the total colonies surveyed showed detectable populations of varroa mites.

[1] A.F.B. = American Foul Brood
[2] E.F.B. = European Foul Brood
[3] VMSUR = Varroa Mite Surveyed
[4] M = Migratory colonies from Florida, Louisiana, etc.
[5] R = Resident colonies kept in Massachusetts all year.

4

Pesticide Bureau

Activities of Enforcement in the administering of the Right-Of-Way Program and Pesticide License Examinations are covered in separate sections. Data for the activities of Enforcement are compiled using the 98 federal fiscal year, ending on the 30th of September 1998, regarding activity completed and/or begun during that fiscal year.

During FY 98; twenty five inspections for Worker Protection Standard (WPS) were conducted. No violations were noted.

Greenhouse	6
General Agriculture	6
Nursery	5
Orchard	4
Cranberry	2
Vinyard	2

As in past years, Enforcement continues to lecture to the pesticide-using community regarding laws and regulations. These lectures have been sponsored by the UMASS Cooperative Extension and various industry associations and companies.

During FY 1998 the enforcement staff consisted of six inspectors. Inspectors attended the annual training session, sponsored by EPA Region I, conducted for all the New England pesticide programs.

In addition to many phone calls received about pesticide enforcement questions, Enforcement responded to 66 calls regarding various pesticide related concerns that were handled at a lesser level of activity than a complete investigation.

Enforcement conducts routine inspections of pesticide users' establishments and the producers from which they acquire the products. Enforcement also investigates complaints regarding the misuse of pesticides.

Inspections have been conducted as follows:

Agricultural Follow Up	8
Agricultural Use Observations	22
Non-Agricultural Follow Up	57
Non-Agricultural Use Observations	62
Certified Applicator Records Inspections	146
Marketplace Inspections	69
Producing Establishment Inspections	25
Restricted Use Pesticide Dealer Inspections	22
TOTAL	**412**

Physical Samples	141
Documentary Samples	42

Notice Of Aerial Applications of Pesticides	19
Permits For Aerial Application of Pesticides	2

Enforcement Actions

WARNINGS ISSUED:

Agricultural Follow Up	4
Non Agricultural Follow Up	18
Marketplace Inspections	3
Pesticide Applicator Records Inspections	45
Restricted Use Pesticide Dealer Inspections	1
TOTAL	**71**

ADMINISTRATIVE ORDERS:

Use Inconsistent With Label	1
Use Without Appropriate License	2
Use Results in Adverse Effect To Environment	1
Distribution of Misbranded Pesticide	1
Distribution of MA Unregistered Pesticide	1
TOTAL	**6**

Rights-of-Way (ROW) Management

1998 was viewed as a year of streamlining and viability within the regulatory structure of the Rights-of-Way program. Cooperative interaction between agencies of the Department of Environmental Protection (DEP), the Massachusetts Water Resources Authority (MWRA), Chief Elected Officials, and the Bureau was formulated. This interaction culminated with extensive field work being performed by members of the Bureau's Technical Staff (ROW and Groundwater) in identifying water features throughout the major watershed areas.

Compliance Monitoring

Nine enforcement observations were conducted by Pesticide Enforcement. Of these, all were conducted on Rights-of-Ways bordering sensitive areas along Utility, Roadways of Massachusetts Highway System and major rail lines, such as Massachusetts Electric, Conrail, New England Power, and Amtrak National Rail Lines.

Additionally, individual inspections of Rail Terminal Sites and Railroad Network Sections totaling approximately 350+ miles in length were made to the following: Conrail, Amtrak, New England Central, Boston and Maine Railroad, the Providence and Worcester Railroad and the Quincy Terminal Railroad. These individual checks determined accurate rail markings, delineation corrections, and specific enforcement re-checks before and after initial applications determining regulatory boundaries.

Roadways

Inspections to specific lengths of roadways, such as Rte. 91 Springfield, Rte. 3 in Weymouth, Norwell, and Hanover, were conducted by the Bureau to verify flagging systems put in place by the Massachusetts Highways. After several meetings with all five districts of Massachusetts Highways it was determined that an extensive identification flagging system should and would be used to solidify a generic flagging system. New permanent devices were set in place this year.

Additionally, over sixty towns and/or municipalities were visited in 1998 reviewing regulatory provisions for roadside management.

Sensitive Area Identification

In September of 1998 the Rights-of-Way program mailed a press release to all major media outlets, requesting "Private Well Locations" from individuals throughout the Commonwealth. This notification to the media is carried out each year. We have received approximately twenty two additional private well sites that have been passed along to applicants for review and identification in 1999.

Vegetation Management Plans

In 1998 no VMP's were submitted.

Yearly Operational Plans

Eighteen Yearly Operational Plans were submitted and approved by the Bureau. These plans covered operational activities for 290 cities and towns.

Additional Education

In 1998 the Rights-of-Way Enforcement Program participated in and completed the following activities:

- Initiated outreach program to Massachusetts Highway Systems five districts.
- Primary speaker to the Boston and Maine Railroad's Information to workers program (outlining ROW practices.)

Management courses:

- Legislative and Budget Process (November 1997)
- State Finance Law (December 1997)
- Labor/Management Relations (January 1998)
- EEO Overview/Cultural Diversity (February 1998)
- Ethics in State Government (March 1998)
- Understanding and Preventing Sexual Harassment (April 1998)
- Statewide Personnel and Financial Computer Systems (May 1998)
- Information Technology Initiatives in Massachusetts (June 1998)

Worker Protection Program (WPS): "Compliance through Education"

The Pesticide Bureau encourages compliance through education. Achieving compliance is easier when we educate the grower with workshops, trade shows, and routine inspections. This year, as a result of an enforcement action, we obtained funding to sponsor several WPS workshops. We joined Cooperative Extension Service (CES) in administering these workshops around the Commonwealth. Each workshop featured instruction on training workers and handlers. Posting requirements, Personal Protective Equipment (PPE), and communication tips were also covered. Establishments that had enforcement/compliance issues were expected to participate. In addition, several individuals that were interested in a "re-fresher" of the Standard, also attended.

We also participated in the Personal Protective Equipment Workshops that were sponsored this year by CES. These workshops covered the various types of PPE available, and how to choose the appropriate equipment as required by the label. This was also a unique opportunity for growers to see the technological advances made in the various types of PPE they must utilize. The education obtained from these PPE sessions enhance grower ability to comply with the provisions of PPE in the Standard.

The Bureau also staffed tables at various grower meetings. These meetings provide an ideal opportunity to field questions from growers, and obtain feedback pertaining to the Standard from the grower community. Maintaining a dialogue with the various commodity groups is a vital part of assuring compliance with the standard. These meetings also offer the growers a chance to obtain additional compliance supplies, safety posters, "How to Comply" Manuals, training books, etc. We try to assist growers with their compliance needs.

In many enforcement investigations, inspectors are able to supply the necessary components to assist growers in complying with the standard prior to leaving the establishment. If materials needed are not immediately available, growers are given sources where they can be obtained.

The Bureau staff is available to assist growers in interpreting/complying with the WPS.

Ground Water Protection Program

Program Update

In FY '98, the Department continued the implementation of the Protection of Ground Water Sources of Public Drinking Water Supplies from Non-Point Pesticide Contamination. These regulations are found in 333 CMR 12.00 and are also known as the Ground Water Regulations. This was the seventh active year of the Regulation, and the Department received five applications for Pesticide Management Plans (PMPs). An approved PMP is required for the use of any pesticide identified as a Potential Ground Water Contaminant within the Zone II of large Community drinking water wells. There were no additional active ingredients included in the list of Potential Ground Water Contaminants.

The five applications that were received and approved total one more than last years' total and indicate a stabilization in the number of applications requested. Every year the number of PMP applications submitted continues to decrease from the first year high of 17.

EPA Ground Water Protection Strategy

The central goal of EPA's Pesticides and Ground Water Strategy is to manage the registered uses of pesticides in order to prevent adverse effects to human health and the environment, and to protect the integrity of the nation's ground-water resources. A principal tenet of this strategy is that states need to take the lead role in managing agricultural chemicals, as a result of the site specific nature of pesticide use and the potential for ground water contamination.

In order to promote the state role, the EPA has recommended that states develop Generic State Management Plans (GSMP) to manage pesticides for the prevention of ground water contamination. Generic State Management Plans should address pesticide use in all geographic areas, including rural and urban areas, golf courses, and rights-of-way. This approach permits the tailoring of pesticide management measures to meet the specific local ground water protection needs.

The Pesticide Bureau, with input from the Department of Environmental Protection and the Department of Public Health, is developing a GSMP in order to address the requirements of the EPA's Pesticides and Ground Water Strategy and of the Department's ground-water protection strategy.

State Pesticide Management Plans

The Department's Ground Water Program has continued its development and implementation of GSMP requirements and components. These requirements include the collection of data, such as pesticide use information, that will be used as the basis for the assessment of ground water vulnerability, monitoring, and prevention activities.

The EPA issued the proposed Pesticide Management Plan Rule which requires states to develop and submit management plans to prevent impacts on ground water from the use of the five previously identified active ingredients within 24 months following final issuance of the rule. The rule also requires monitoring to assess current or continued contamination, prevention activities, and continued assessment of the efficacy of the management components.

Monitoring

The Department developed a sampling program of dairy farmers who maintain private drinking water wells on their property. Dairy farmers were chosen since they typically grow silage corn to feed their cows. Water samples were analyzed for the five herbicides; atrazine, cyanazine, simazine, alachlor and metolachlor are identified in the proposed EPA Pesticide Management Plan Rule. State Management Plans must be completed for these herbicides in the future.. Samples were also analyzed for those degradation products of these five compounds since many are found in groundwater rather than the parent compound, and nitrates. The coordinates of each sampling point were determined by GPS location. In addition, these sampling results will be transferred to a GIS data layer for future assessment needs.

The Department identified 238 dairy wells for sampling in this program. Letters were sent to the farmers notifying them of the program and requesting their assistance to allow sampling of their wells. In the Summer of 1997 the Department collected 216 samples from across the state and farmers were provided copies of the analysis results.

There were a substantial number of wells that contained detectable residues of SMP compounds or one of their breakdown products. There were no samples that exceeded the Maximum Contaminant Levels (MCLs), which are health based standards for pesticides in drinking water. There were a total of 24 wells which were positive for one or more of the previously listed compounds or their metabolites. The results generally indicate that there is a significant amount of low level contamination of corn herbicide residues in all areas where they are used. However, the most surprising result was the number of wells with elevated nitrate levels--some exceeding the federal guideline of 10 ppm.

In the Spring of 1998, the Department limited sampling to wells which had either detectable levels of pesticide residues and/or nitrate levels over 5 ppm. In addition, other sites were included that had been previously missed or samples lost. A total of 57 sites were chosen and 50 samples collected. The seven sites not sampled were the result of farms going out of business or due to refusal of sampling.

Out of these 50 farms, 24 were selected for the presence of pesticides in the well water during 1997; and 26 were selected either due to the presence of nitrate levels above 5 ppm or because the samples were lost in the lab.

Out of the 50 farms sampled, 24 tested positive for pesticides in 1997. Out of those 24, 21 tested positive again in 1998. In addition, 17 more farms were tested positive in 1998 thus adding the positive detects to 38, 14 more than 1997.

Analysis was performed for the following compounds: Desisopropyl Atrazine, Desethyl Atrazine, Atrazine, Alachlor, Alachlor Metabolite, Simazine, Metolachlor, Acetochlor, Cyanazine, Lindane, Dacthal, and Fonofos.

Compounds Detected in 1998 Ground Water Sampling

TOTAL NUMBER OF SAMPLES TAKEN: 50
TOTAL NUMBER OF POSITIVE DETECTS: 38

COMPOUND	NUMBER OF DETECTS	RANGE (ppb)
Desisopropyl Atrazine	8	0.126 - 0.410
Desethyl Atrazine	31	0.067 - 0.688
Atrazine	23	0.033 - 1.28
Alachlor	7	0.078 - 0.834
Metolachlor	13	0.070 - 2.35

Global Positioning System

The sampling location of each groundwater sampling point was determined with a Global Positioning System unit (GPS). GPS is a satellite based positioning system that can identify the three-dimensional coordinates (longitude, latitude and altitude) of any point on the earth. The GPS information will be transferred to a Geographic Information System (GIS) for plotting the location of PMP sites, groundwater sampling points, and public well locations that have also been mapped by GPS. The GIS is also capable of maintaining non-spatial information about the application site such as; soil type, pesticide applied, application rate, and other data about the PMP. This GIS information has been used to generate maps of the Public Wells, Zone II areas, and physical features to assist applicators in determining if their fields are within a primary zone of contribution of a public well.

Potential Ground Water Contaminant List

The Department registered a new active ingredient, acetochlor, in the previous year that was added to the list of Potential Ground Water Contaminants. Acetochlor, sold under the trade names of Harness® and Surpass® is registered as State Limited Use (SLU) pesticides that requires applicators to hold a pesticide certification license and to obtain a permit from the Department prior to application. The permit is required to ensure that the pesticides are not being applied to soils that are prohibited on the label. The Department issued five permits for the application of acetochlor during FY '97, and a total of 5 permits were issued in FY '98 for application to 132 acres.

Pesticide Use Reports

The Department requires that all licensed applicators submit annual use reports for all pesticide applications. The use report identifies the active ingredients, amounts, and use sites and patterns of pesticides used in the Commonwealth. The information contained in the use reports is being entered into a computerized data management system, to allow for the most effective future use of the information.

This information will enable the Department to generate an accurate listing of actual pesticide usage amounts and patterns, and facilitate an assessment of their potential impacts on ground water. Accurate information on pesticide usage within the Commonwealth is a key element in any assessment and subsequent protection plans.

Surface Water Sampling

In 1997 the Department received a complaint from an abutter to a cranberry bog questioning the presence of pesticide residues in the flood and discharge water in the adjoining pond. As a part of that complaint the Pesticide Bureau took a number of water samples from the bog, drainage canals, and the pond. There was one pesticide detected, dichlobenil, at low concentrations in the water samples. However, there were some substantial amounts of the dichlobenil breakdown product known as 2, 6-dichlorobenzamide or BAM, found in drainage water.

In order to confirm the presence of the of the two compounds, additional samples were taken of the drainage and pond water, and soils from the bog. The results confirmed the presence of BAM at low concentrations in many of the water samples, and dichlobenil in a couple of soil samples. Moreover, there were some additional pesticides detected at very low concentrations in the soil samples at the cranberry bog.

As a result of that investigation and detection of BAM, the Department initiated a surface water monitoring program to assess the possible distribution of other pesticide residues in the adjoining pond (Long Pond) and in the interconnected surface water network. This water system is used for irrigation and recreational purposes, but most importantly is the primary drinking water supply for the cities of New Bedford and Taunton. Furthermore, the pond waters are probably interconnected with the local ground water which provides drinking water for many citizens in the Lakeville area.

In addition, the Department identified a need to determine whether the observed contamination was a localized problem due to an individual grower or if it was a general problem adjacent to all bogs. There was also a need to assess the surface water impacts on other bog systems. Therefore, the Department identified another pond in Wareham that had questions of surface water contamination from cranberry bog operations.

The Department met with State representatives for the communities of Taunton and New Bedford and volunteered to sample their water supplies to ascertain the potability of their water. The Department also set a sampling schedule at the cranberry bogs to determine the scope and magnitude of potential surface water and ground water contamination from cranberry bog pesticide operations.

Currently, the Department has collected a total of 147 samples as a result of this sampling program. This includes 65 soil, surface and groundwater samples collected in proximity to the two cranberry bogs investigated. The remaining 77 samples consist of surface water supply samples, raw water, finished water (after treatment), and residential sampling points for the communities of Taunton and New Bedford.

In general, the most commonly found compound was BAM which was found in most surface water samples. Also found at the Long Pond cranberry bog were the compounds dichlobenil, diazinon, chlorothalonil, and carbaryl at low levels that were below health based advisory levels. The water supply samples had revealed three detections each of chlorothalonil and chlorpyrifos at levels significantly below the Maximum Contaminant Level (MCL) or the Health Advisory Level (HAL).

Pesticide Applicator Certification and Training Program

The Massachusetts Department of Food and Agriculture is the state lead agency for pesticide regulation in the Commonwealth. The Pesticide Bureau's licensing program has a critical position in the Department carrying out both state and federal mandates pertaining to pesticide applicator licensing. These mandates titled the Massachusetts Pesticide Control Act (MPCA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) set the standards for those individuals who want to use pesticides. Pesticides can effect human health, domestic animals, wildlife, and the environment. As a result, individuals using pesticides need to be confirmed as competent in the safe and proper use of these materials. The Certification and Licensing program fulfills the intent of these mandates by administering state examinations, issuing certifications and licenses, assuring continued competence, and approving and coordinating training.

Certification and License Types

There are four (4) types of pesticide licenses in Massachusetts:

1. Commercial Applicator License
2. Dealer License
3. Commercial Certification License
4. Private Certification License

These different types of certification and license documents permit individuals to legally use pesticides including, but not limited to, purchasing, selling, applying, mixing, loading, storing, disposing, and transporting.

Certified and licensed applicators have a responsibility to handle all pesticides safely. As a result, these individuals must demonstrate their pesticide knowledge and competency by passing a state pesticide examination.

Certification and Licensing Examinations

Exam Frequency

During any fiscal year, a number of state examinations are offered to those seeking pesticide licensure. The number of state pesticide exams offered this year as compared to prior years--24 scheduled in FY '98 and 25 in FY'97--remained similar. Twenty-four (24) state examinations were scheduled for those individuals seeking pesticide licensure during Fiscal Year 1998.

This total reflects one less opportunity compared to the twenty-five offered in FY '97. These statistics reflect minor differences from one fiscal year to the next due to the location availability and scheduling coordination. Nonetheless, our overall objective continues to be one that offers as many exams as practical, and within geographically accessible locations.

In addition to offering adequate opportunities to take the state pesticide examination, we prioritize the scheduling so that they meet peak periods of applicator and company needs during the months of March, April, and May of each fiscal year due to the seasonality aspects of the pesticide application industry. Finally, the exam schedule is set up to provide an exam opportunity at least once a month.

The certification and licensing program works continually with individuals seeking pesticide licensure from the examination process through the final steps of becoming certified or licensed. Out of the 2,162 individuals who registered for an exam in 1998, only 1,846 were actually present. Even though those who register pay a non-refundable processing fee, some never show up to take the exams.

Number of Exams taken by License Types for Fiscal Years 1996, 1997, 1998

EXAM TYPE	FY '98	FY '97	FY '96
Commercial Certification Exam	243	186	161
Dealer License Exam	10	13	13
Commercial Applicator License Exam	1, 457	1,333	1,133
Private Certification Exam	136	110	94
Total	**1,846**	**1,642**	**1,401**

The number of individuals taking exams increased again (up 204) for FY '98. This increase represents approximately an eleven (11%) percent increase over FY '97.

Certification and License Documents

The process to obtain a pesticide certification or license involves submitting proper applications (i.e. exam, license) and order forms (i.e. study materials, workshops).

Registration

During FY '98, we continued to mail out several thousand pesticide exam and license information bulletins to individuals and pest control companies. This fourteen (14) page examination and license bulletin provides interested individuals guidance on how to obtain a pesticide certification or license including such items as an exam application, exam schedule, study guide order form, applicator license training course information, resume form to verify experience, and other useful information. The program is very efficient in its response to exam and license information requests by mailing the bulletin out the next day.

Study Experience

Those individuals seeking a pesticide certification or license need to learn and acquire knowledge concerning pesticide concepts, principles, practices, regulations, and terminology. The study experience is a self-directed learning experience. It is important to note that the objective is to verify minimum competency to use pesticides. Individuals purchase required study materials from the University of Massachusetts, and are required to be familiar with the following materials:

- General Applicator Manual
- General Applicator Manual Supplement
- Massachusetts Pesticide law and regulations
- Specific Certification Manual

The self-directed study experience provides a flexible format whereby the individual can learn and gain primary pesticide knowledge at their own pace. However, there is classroom training (voluntary) covering the General Applicator Manual and Supplement made available through the University of Massachusetts Cooperative Extension Service.

Number of Certification and License Documents Issued

CERTIFICATION/LICENSE TYPE ISSUED	FY '98	FY '97	FY '96
Commercial Certification	2,403	2,385	2,494
Dealer License	134	142	143
Commercial Applicator License	2,610	2,593	2,382
Private Certification	1,597	1,591	1,588
Total	**6,744**	**6,711**	**6,607**

NOTE: Each fiscal year we continue to observe an increase in the Commercial Applicator License Type due to the new licensing standards that became effective January 1, 1994 (see standards below). These numbers affect the overall total by indicating an increase of about 0.5%. The current numbers tell us that individuals are maintaining their pesticide credentials. In some years, we see decreases in the numbers of licenses issued due to factors such as individuals retiring, changing their profession, having their records purged due to not maintaining continuing education requirements, seasonal employment layoffs, and relocation. The only license type to decrease was the Dealer License (down 8) or approximately 6%. A number of individuals who held a Dealer License for many years decided to let this license lapse because they did not need this credential any longer.

Renewal Applications

Once individuals have passed the appropriate exam and have demonstrated they have acquired the necessary knowledge to handle pesticides in a safe manner, they are sent an application to obtain the pesticide license. Once an individual becomes licensed, the document must be renewed on an annual basis pursuant to state pesticide law and regulations. All certification and licenses--with the exception of Dealer Licenses--expire on December 31st of each year. The Dealer License expires on the last day of February of each year. As a result, individuals eligible to renew for the next year automatically receive a renewal application. These renewal applications are mailed out in October and each applicator must renew their certification and/or license by January 1st. Otherwise, they are required to retake and pass state examination(s) to be eligible for a certification or license for the new year.

Note: As implemented in previous fiscal years, another effort was made during FY '98 to enforce the January 1st deadline. The majority of individuals eligible to renew their pesticide credential did so by January 1st. This effort insured that all eligible licensees had a new 1998 pesticide license in time for the new year. As a result, the professional community, the industry as a whole, and the public benefit.

Total Renewal Applications Mailed

	FY '98	FY'97	FY'96
Total Renewal Applications Mailed	6,841	6,786	6,531
Total Returned and Approved	5,911	5,934	5,943
Percent Compliance (%)	86%	87%	91%

Number of Persons Who Renewed Certification and License

Credential Type	FY '98	FY '97	FY '96
Commercial Certification	2,221	2,296	2,427
Dealer License	128	145	137
Commercial Applicator License	2,060	1,987	1,840
Private Certification	1,512	1,506	1,539
Total	**5,911**	**5,934**	**5,943**

Overall, the percent compliance decreased slightly from prior fiscal years. It appears more individuals are not renewing their pesticide certification or license renewals. This could indicate the fact that a number of those individuals holding a certification or license are seasonal employees especially commercial applicator license holders. It could also be explained by the fact that we have been enforcing the January 1st deadline. Those who do not make the deadline may opt to retake state exams in the next year.

In addition, a number of licensees were required to retake state exams because they did not maintain continuing education contact hours. The FY '98 raw numbers show that 2,694 applicator license renewals were mailed out and 2,060 were returned. This represents 634, a little less than 25%, renewals that were not returned. Those individuals who sell restricted use pesticides returned their 1998 Dealer License renewal for a compliance rate of 88% (146 mailed and 128 returned). The other license types did much better such as the Private Certification (grower) license type. Of the 1,592 renewals mailed, 1,512 were mailed back and approved. This represents a high compliance rate of 95%. Of the Commercial Certification license type, 2,409 were mailed out and 2,221 were returned and approved. This reflects another high compliance rate of 92%.

Working Standards

Current certification and licensing standards that became effective during FY '94, continued to work well through FY '98.

Age Requirement

An individual must be at least **18 years old** to take the commercial certification exam.

Experience Requirement

Before an individual can take a **commercial certification** pesticide exam, the individual must verify they have appropriate experience and/or education. In effect, those individuals who have held a commercial applicator license for two years qualify to take the commercial certification examination. The intent of this change is to insure that individuals have specialized knowledge and skills before handling pesticides classified as restricted use. This requirement accounts for the steady but small increase in those taking and passing the commercial applicator license exam, and becoming licensed in this credential type.

Uniform Closed Book Examinations

All examinations are closed-book. This provides for an increased incentive to prepare thoroughly and prudently for state pesticide examinations.

Re-taking State Examinations

If an individual fails an exam twice, the individual must wait three months before re-taking it. If an individual fails an exam three times, the individual must wait one year before re-testing.

Failed	FY '98	FY '97	FY '96
2x's	131	98	61
3x's	50	32	20

For Fiscal Year 1998, 131 individuals failed state pesticide exams twice--an increase of 33 from FY '97. The number of individuals who failed three times increased from 32 in FY '97 to 50 in FY '98. This increase is similar to the last two fiscal years and the increase correlates with the increase in the number of individuals taking the state pesticide exam.

Who Needs A License?

The Massachusetts Pesticide Control Act requires all persons who apply pesticides in public and private places used for human occupation and habitation, with the exception of residential properties with three or less dwelling units, to be in possession of a valid license or certification issued by the Department of Food and Agriculture. The law also requires individuals (custodians, landlords, and grounds and maintenance personnel) who use pesticides "as part of their duties" in and around apartment buildings, condominiums, schools and other similar facilities to obtain a pesticide license.

The increase in statistics of certain license types reflect the fact that more people in various positions as cited in the above paragraph are going through the pesticide licensing process.

Continuing Education

Every three years, license holders must attend continuing education programs and obtain contact hours to maintain as well as enhance their pesticide application knowledge.

During FY '98 an audit of pesticide users took place. The FY '98 audit was a 100% audit compared to the FY '97 ten percent (10%) random audit. A total of 592 applicators were audited to verify that they had met the required number of contact hours by the end of a three year training period.

FY' 98 Number of Audits by Credential Type

Type	#	# of Contact Hours Required
Commercial Certification	74	12
Private Certification	51	12
Commercial Applicator License	461	6
Dealer License	6	3
Total	**592**	

Those applicators who did not meet the required number of educational hours were obligated to re-take the state examination to be re-certified or re-licensed during FY '98. The number of FY '98 audits approved was 387 out of the 592 which indicates a 65%

compliance rate. The remaining 35% either did not return their audit or did not satisfy the educational hours required, thus they were required to re-take state exams. It was noted that a number of individuals wait until the last minute to attend training courses creating a conflict for them since the continuing education programs are not offered all year long. Nonetheless, the audits do assist greatly to create awareness that applicators must avail themselves of the available continuing education programs to maintain their certification or license.

EPA Proposed Changes to the Worker Protection Standard (WPS)

Background

Under the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA), the EPA establishes standards for protecting applicators and farm workers from pesticide exposure. The WPS defines and sets minimal standards for the types of personal protective equipment (PPE) for use when handling pesticides. These standards must be displayed on the pesticide label. Under the WPS, chemical resistant gloves are required in several circumstances, such as mixing, loading and applying pesticides, and when workers re-enter pesticide treated areas during the restricted-entry interval (REI). The WPS generally prohibits glove liners made of absorbent material from being used under chemical resistant gloves.

In 1995, EPA received several requests from growers to allow workers to wear separate glove liners beneath their chemical resistant gloves when entering exiting aircraft used to apply pesticides.

For the purposes of EPA's proposal, a glove liner is defined as a separate glove-like hand covering made from a light weight material, with or without fingers. Flocking, which consists of closely placed small tufts of soft material glued or bonded onto the insides of gloves, is not defined as a glove liner. Flocked gloves are prohibited by the WPS because they are nearly impossible to adequately decontaminate, and EPA believes that they are unlikely to be disposed of after they are used.

Summary of Proposal

- All agricultural workers (harvesters, cultivators, pesticide handlers) are permitted to wear separable glove liners beneath chemical resistant gloves.

- Workers may choose when to wear the liners.

- The liners may not be longer than the chemical resistant glove so that they do not extend outside of the glove.

- The liners must be disposed of after 8 hours of use, or at the end of the work day, whichever comes first.

- Agricultural pilots do not have to wear chemical resistant gloves when entering or exiting aircraft.

Pesticide Product Registrations

The State Process

Any person who has obtained a pesticide product registration from the EPA must then apply for a registration with the Department of Food and Agriculture. The registrant or an agent acting on behalf of the registrant, is required to submit an "Application for New Pesticide Registration", a Material Safety Data Sheet (MSDS), and a product label. A fee of $100.00 dollars is also required for each different EPA registration number.

New products are usually registered on a monthly basis. Every product label is thoroughly reviewed for compliance with state and federal laws and then brought to the Pesticide Board Subcommittee for consideration. A registration is valid from a period beginning with the initial date of approval by the Subcommittee and ending on the next June 30th. Each registration must be renewed annually no later than July 1, and the cost is $100.00 per EPA number. Currently there are 9,989 pesticide products registered in the state.

Special Local Needs (SLN) Registrations

When a particular agricultural problem exists that can only be mitigated through the use of a pesticide that is not federally registered for that specific purpose, that pesticide's use may be regulated by the state under section 24© of FIFRA. Currently, there are 13 active SLNs.

HACO (HOPKINS AG CHEMICAL CO.)
RAMIK BROWN
(DIPHACINONE) FOR USE IN ORCHARDS AGAINST RODENTS
EPA REG. NO. 876-184
MA SLN NO. 77-0001

RHONE POULENC
WEEDAR 64
(DIMETHYLAMINE-2,4-D) FOR USE ON CRANBERRIES AGAINST WEEDS
EPA REG. NO. 264-2
MA SLN NO. 79-0001

RHONE POULENC
LARVIN BRAND 3.2 THIOCARB INSECTICIDE/OVICIDE
THIOCARB FOR USE ON SWEET CORN AGAINST ARMYWORMS, CORN EARWORM AND EUROPEAN CORN BORER
EPA A SLN NO. 89-0001

ISK BIOTECH CORP.
BRAVO 720
(CHLOROTHALONIL) FOR USE ON CRANBERRIES AGAINST UPRIGHT AND RUNNER DIEBACK
EPA REG. NO. 50534-188
MA SLN NO. 90-0001

COMPLIANCE SERVICES INTERNATIONAL
CARBAMATE WDG FOR USE ON CRANBERRIES AGAINST FAIRY RING DISEASE
EPA REG. NO. 45728-7
MA SLN NO. 93-0002

ABBOTT LABORATORIES
DIPEL ES BIOLOGICAL
INSECTICIDE EMULSIFIABLE SUSPENSION FOR USE ON CRANBERRIES AGAINST GYPSY MOTH, CUTWORMS, CRANBERRY BLOSSOM WORM, FALSE ARMY WORM AND SPANWORMS
EPA REG. NO. 275-65
MA SLN NO. 95-0001

PLATTE CHEMICAL CO.
CURBIT EC HERBICIDE
ETHALFLURALIN FOR WEED CONTROL IN PUMPKINS, SUMMER SQUASH AND WINTER SQUASH
EPA REG. NO. 34704-610
MA SLN NO. 95-0002

CIBA-GEIGY CORP.
DUAL 8E
METOLACHLOR FOR WEED CONTROL IN TRANSPLANTED CABBAGE AND TRANSPLANTED BELL PEPPERS
EPA REG. NO. 100-597
MA SLN NO. 95-0004

ISK BIOSCIENCES
BRAVO ULTREX
CHLOROTHALONIL TO CONTROL UPRIGHT AND RUNNER DIEBACK DISEASE ON CRANBERRIES
EPA REG. NO. 50534-201
MA SLN NO. 96-0001

VALENT USA CORPORATION
ORTHENE 75 S SOLUBLE POWDER

ACEPHATE AT A REDUCED PHI TO CONTROL SECOND GENERATION
SPARGANOTHIS FRUITWORM ON CRANBERRIES
EPA REG. NO. 59639-26
MA SLN NO. 96-0002

VALENT USA CORPORATION
ORTHENE 75 WSP
ACEPATE AT A REDUCED PHI TO CONTROL SECOND GENERATION
SPARGANOTHIS FRUITWORM ON CRANBERRIES
EPA REG. NO. 59639-89
MA SLN NO. 96-0003

Experimental Use Permits (EUP)

State experimental use permits are required to control potential hazards of pesticide experimentation under outdoors, greenhouse, and domestic animal trial conditions. To obtain such a permit, a state application must be filed with the Pesticide Board Subcommittee along with a product label, a copy of the EPA EUP and a fee of $100.00 dollars. The following EUP was granted this year.

Novartis Crop Protection
Medallion Fungicide a.i. fludioxonil tested as a protectant fungicide for the control of a variety of diseases on turf grass.
EPA EUP No. 100-EUP-100
MA EUP No. 97-0001

Waste Pesticide Disposal

In 1998, the Pesticide Bureau developed a contract between the Commonwealth and Safety-Kleen Inc. (formerly Laidlaw Environmental Services Inc.) for Pesticide Collection Services. There were two components to the contract:

(1) A General Clean Out of stockpiled pesticides to target licensed and certified pesticide applicators, farmers and municipal and state agencies in a series of Pesticide Collection Events at various locations statewide

(2) An On-Call Pick-Up Service for municipal or state agencies. The on-call pick up service will allow state agencies and municipalities to use the services of Safety-Kleen to collect any unwanted or unused pesticides.

The **Pesticide Collection Services** contract is significant for several reasons. The general clean out is the first statewide pesticide collection event of its kind in Massachusetts in eight years. Furthermore, the contract represents the first time that the **Universal Waste Rule** (310 CMR 30.000), a major new hazardous waste regulation, has been used to collect waste pesticides. A pesticide may be considered to be a universal waste if it is being collected as part of a *DFA authorized* **Waste Pesticide Collection Program**. By classifying a waste pesticide as a *universal waste*, as opposed to a *hazardous waste*, the regulatory obligations on the generator are less onerous. As part of the Waste Pesticide Collection Program authorization process, the Bureau has developed an **"Interim Guidance for Waste Pesticide Collection Programs"** and an application form.

The **General Clean Out** consisted of seven one-day collection events which were held throughout the State November of 1998 at Massachusetts Highway Department depots. Licensed and certified applicators were required to pre-register with Safety-Kleen in advance of dropping off their waste pesticides. They were then assigned a time at which to show up at the collection site. The Bureau cleaned out over 37,000 lbs of waste pesticides in this event.

As an initial exploration of the **On Call Pick Up Service** for municipal agencies, the Bureau is working with the Department of Environmental Protection, Safety-Kleen and the City of Newton to develop a pilot Municipal Pesticide Collection program for the Spring of 1999.

These collection program efforts represents the first stage of a commitment by the Pesticide Bureau to provide a regular opportunity for pesticide disposal in the Commonwealth. A pesticide container collection program is being planned for October 1999.

Mixing, Loading and Storage Guidelines

The Pesticide Bureau's Mixing, Loading and Storage Guidelines were finalized in November and officially launched at the Farm Bureau Annual Meeting in December. Two versions have been developed:

- Mixing, Loading and Storage Guidelines for Large Quantity Users and Medium Quantity Users.
- Mixing, Loading and Storage Guidelines for Homeowners and Small Quantity Users.

The purpose of these documents is, very simply, to provide guidance to individuals looking for information on appropriate techniques and approaches for the mixing, loading and storage of pesticides.

The topic areas covered include:

- selecting a storage location
- storage practices
- storage inside an existing building
- hazardous materials storage buildings
- construction of a new pesticide storage facility
- mixing and loading location selection
- mixing and loading practices

- mobile containment systems
- closed mixing systems
- construction of a mixing/loading pad
- recommended safety practices
- funding options
- manufacturers and suppliers of needed materials

The documents were prepared with input from written resources, individuals and organizations with a broad range of expertise and experience. The result is a solid body of guidance which represents a general consensus on how pesticide mixing, loading and storage issues should be approached.

MASSDFA Online Web Site

Information about the Department of Food and Agriculture can be found at the Department of Food and Agriculture web site, **MASSDFA Online**. The page which went online at the beginning of January can be accessed at the following URL: **http://www.massdfa.org**

The site provides an easily accessed gateway to information about the Department, its programs and personnel. Some of the features include:

- A highly animated Bureau of Animal Health page
- The entire text of the Pesticide Bureau Regulations which can be downloaded in stages from the site
- Comprehensive information about the Bureau's Statewide Pesticide Collection Program, including registration certificate and location directions
- The Bureau's Waste Pesticide Collection Program Application forms and Guidance document for downloading
- The site includes a schedule of the times and dates of pesticide user registration and certification examinations. Comprehensive directions to the location are then provided in a linked page.
- Detailed information about the Agro-Environmental Technology Grants Program along with a direct link to the Request For a Response

A major strength of the site is the Pesticide Bureau Publications Page. All Pesticide Bureau publications can be downloaded, copied and distributed. Among the publications are *The IPM Kit for Building Managers* and *A Homeowners Guide to Environmentally Sound Lawncare*. The Bureau newsletter, *The Pesticide Bureau News* is also available online.

The long term goal is to complement this informational role with more complex functionality, such as providing searchable databases of registered pesticides, licensed applicators, and registered exam participants.

The site has steadily garnered an audience. December 1998 has been the busiest month thus far. The heaviest traffic for pages occurs in the morning around 10 am. In December, the site registered requests from all over the world including Australia, Taiwan, Ireland and the United Arab Emirates. Bases upon traffic to date, January 1999 is predicted to be the busiest month yet.

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